Amendments to the Specification:

Please amend the paragraph starting at page 4, line 24 and ending at page 5, line 6 to read, as follows.

--Subsequently, toner images are sequentially superimposed and transferred onto the intermediate transfer belt 105 by repeating the above-mentioned process three times using the second to fourth developing devices ~~means~~ 104b to 104d. That is, a second toner image developed with the magenta toner, a third toner image developed with the cyan toner, and a fourth toner image developed with the black toner are sequentially transferred to and stacked on the surface of the intermediate transfer belt 105.--

Please amend the paragraph starting at page 5, line 20 and ending at page 6, line 6 to read, as follows.

--Here, the respective developing devices ~~means~~ 104a, 104b, 104c, and 104d are in the [[a]] form of a cartridge and have: the developing roller 111 serving as the developer carrying member; a developing blade 112 serving as a developer regulating member which abuts against the developing roller 111 to regulate an amount of toner on the developing roller 111; a supply roller 113 which abuts against the developing roller 111 to supply a mono-component nonmagnetic toner to the developing roller 111; and an agitating member 114 which carries a toner to the vicinity of the supply roller 113. The developing devices ~~means~~ 104a, 104b, 104c, and 104d are detachably attachable to the developing apparatus 104 in the image forming apparatus.--

Please amend the paragraphs starting at page 6, line 20 and ending at page 7, line 5 to read, as follows.

--As the developer carrying member, a developing roller having elasticity and electrical conductivity is often used. That is, since development is performed by bringing the developing roller into pressed contact or contact with an image bearing member, in particular, in the case in which the image bearing member is a rigid body, the developing roller is constituted by an elastic body in order to prevent damage ~~damaging~~ to the image bearing member.

In addition, the developing blade 112 is brought into abutment against the surface of the developing roller 111 with a light pressure utilizing spring elasticity of a thin metal ~~metal thin~~ plate.--

Please amend the paragraph starting at page 14, line 3 and ending at page 14, line 6 to read, as follows.

--controlling, in accordance with the lapsed time, an operation for giving a charge to the developer in a state in which the developing means is moved to the second position by the moving mechanism. ~~mechanism;~~--

Please delete the paragraph starting at page 14, line 25 and ending at page 14, line 27, as follows.

~~--reading the information on image formation history of the storage means with the reading/writing means;--~~

Please amend the paragraph starting at page 16, line 8 and ending at page 16, line 11 to read, as follows.

--Fig. 8 is comprised of Figs. 8A and 8B which are [[for]] flowcharts showing a control method for an image forming apparatus in accordance with the second embodiment of the present invention;--

Please amend the paragraph starting at page 16, line 16 and ending at page 16, line 19 to read, as follows.

--Fig. 10 is comprised of Figs. 10A and 10B which are [[for]] flowcharts showing a control method for an image forming apparatus in accordance with a third embodiment of the present invention;--

Please amend the paragraphs starting at page 21, line 7 and ending at page 22, line 1 to read, as follows.

--In this way, a contact development is adopted in which the developing roller 5 is brought into pressed contact or contact with the surface of the photosensitive drum 1 by the contact/separation mechanism 40, it is preferable to use a developing roller with a form having an elastic layer of rubber or the like on an external peripheral surface of a metal core. ~~core metal.~~

The developing blade 7 is constituted by a thin metal ~~metal thin~~ plate and is brought into abutment against the surface of the developing roller 5 with a light pressure utilizing spring elasticity of the thin metal plate. As the developing roller 5 rotates, the developing blade 7 rubs and frictionally charges a toner, which is carried to an abutment nip portion

between the developing roller 5 and the developing blade 7 to thereby give a charge to the toner and, at the same time, regulate a thickness of a layer of the toner.

As a material for the thin metal ~~metal thin~~ plate, stainless steel, phosphor bronze, or the like can be used. In this embodiment, a phosphor bronze thin metal plate with a thickness of 0.1 mm was used.--

Please amend the paragraph starting at page 22, line 18 and ending at page 22, line 25 to read, as follows.

--The intermediate transfer belt 9 is supported by [[a]] suspend rollers 12a, 12b, and 12c and is driven to rotate in the direction of arrow at a peripheral speed substantially equal to the peripheral speed of the photosensitive drum 1 while being brought into pressed contact with the photosensitive drum 1 with a predetermined pressing force by the primary transfer roller 11.--

Please amend the paragraph starting at page 23, line 26 and ending at page 24, line 11 to read, as follows.

--A voltage of a polarity opposite to the normal charging polarity of the toner (secondary transfer bias) is applied to the secondary transfer roller 14 by the high voltage power supply (not shown), whereby the toner images stacked and formed on the surface of the intermediate transfer belt 9 may be collectively transferred (secondarily transferred) onto the surface of the transfer material P which is conveyed to a second transfer portion 10b at predetermined timing by [[the]] registration rollers ~~roller~~ 15. This transfer material

P is conveyed to a fixing device 16 and, after the toner images are fixed as the permanent image, discharged to the outside of the apparatus.--

Please amend the paragraphs starting at page 25, line 12 and ending at page 26, line 2 to read, as follows.

--Here, with reference to Fig. 18, a relation between a process control portion of the image forming apparatus and a drive portion (motor), ~~(motor, etc.),~~ a development portion, and a rotary developing apparatus will be described briefly.

A process control portion PD sends a drive signal to drive portions K1 to K3, and the drive portion K1 receives the drive signal to drive to rotate the developing roller 5 of the developing portion, and the drive portion K2 receives the drive signal to drive to rotate the rotary developing apparatus 4. As the developing roller 5 rotates, a charge is given to a toner by friction with the developing blade 7. In addition, the contact/separation (clutch) ~~clutch~~ 40 is operated by the drive portion K3, whereby the rotary developing apparatus 4 may be moved in directions of arrows A and B to be brought into abutment against and separated from the photosensitive drum 1.--

Please amend the paragraph starting at page 32, line 21 and ending at page 33, line 2 to read, as follows.

--As the extraneous additive, for example, metal oxide (aluminum oxide, titanium oxide, strontium titanate, cerium oxide, magnesium oxide, chrome oxide, tin oxide, zinc oxide), ~~oxide, etc.),~~ nitride (silicon nitride, etc.), carbide (silicon carbide), ~~carbide, etc.),~~ metal salt (calcium sulfate, barium sulfate, calcium carbonate), ~~carbonate, etc.),~~ fatty acid

metal salt (zinc stearate, calcium stearate), ~~stearate, etc.);~~ carbon black, silica, or the like is used.--

Please amend the paragraph starting at page 34, line 13 and ending at page 35, line 1 to read, as follows.

--Thus, in the present invention, as shown in Fig. 1, the developing devices ~~means~~ 4a to 4d are provided with the memory portion B serving as storage means such as a flash memory capable of recording and referring to an image formation history in addition to the developing roller 5, the supply roller 6, the developing blade 7, the agitating member 8, and the like, respectively. The memory portions B of the developing devices ~~means~~ 4a to 4d used in the image formation of the last time store a finish time of the image formation of the last time which was performed in accordance with the above-mentioned image forming process. In the case of developing means which is used for the first time since the image forming apparatus was manufactured, it is recorded in the memory portion B of the developing means that there is no image formation history.--

Please amend the paragraphs starting at page 36, line 12 and ending at page 36, line 27 to read, as follows.

--The image forming apparatus ~~main body~~ A includes a process control portion PD for controlling image formation, and the process control portion PD includes a read/write control portion C for accessing the storage portion F of the memory portion B to read out information or performing writing control. In this embodiment, date information (date and

time) at a point when an image forming process of the image forming apparatus A has finished is stored in a predetermined area of the storage portion F.

In addition, instead of the read/write control portion C, the process control portion PD (CPU) controlling a process of the image forming apparatus A may perform read/write control, or a separate dedicated control portion may be provided to control reading and writing.--

Please amend the paragraphs starting at page 38, line 10 and ending at page 39, line 3 to read, as follows.

--Note that, at this point, the developing roller 5 is separated from the photosensitive drum 1 by the contact/separation mechanisms 40 of the developing devices ~~means~~ 4a to 4d.

Next, when a new image formation command is transmitted from the host apparatus such as the personal computer and received in step S3, a lapsed time T from the finish time of the image formation of the last time, which is recorded in the storage means B via the read/write control portion C, until a start time of image formation of this time, which is a time when the image formation command of this time is received, is calculated in step S4. According to a value of T, a time, during which the developing roller 5 should be idled in the preparation process to be performed before the image formation of this time, is determined. Note that idle means an operation for rotating the developing roller 5 in a state in which the rotary developing apparatus 4 is separated from the photosensitive drum 1. ~~drum.~~ A charge is given to a toner by this operation.--

Please amend the paragraph starting at page 40, line 17 and ending at page 40, line 18 to read, as follows.

--Note that ON/OFF of rotation is controlled by the process control means PD in the image forming apparatus A. ~~apparatus.~~--

Please amend the paragraph starting at page 43, line 21 and ending at page 44, line 13 to read, as follows.

--As the developer remaining amount detection means (toner amount detection means) for detecting an amount of toner remaining in the respective developing devices 4a to 4d, a well-known piezoelectric sensor system, magnetic sensor system, optical detection system, antenna detection system, or the like is used. In this embodiment, an optical detection means is used. With the optical detection means, as shown in Fig. 6, a light-emitting element 21 for radiating light such that the light passes through a predetermined part of the developing devices 4a to 4d and a light-receiving element 22 for receiving the light are disposed in the image forming apparatus A, a translucent window 23 is provided on an optical path of the developing devices 4a to 4d, the translucent window 23 is wiped in synchronization with the rotation of the agitating member 8 for the toner, and at that point, a remaining amount of toner in the developing device is detected according to a change in an amount of received light to be detected.--

Please amend the paragraph starting at page 45, line 23 and ending at page 45, line 26 to read, as follows.

--Note that the developing rollers 5 are separated from the photosensitive drum 1 by the contact/separation mechanisms 40 of the developing devices ~~means~~ 4a to 4d at this point.--

Please amend the paragraph starting at page 48, line 1 and ending at page 48, line 9 to read, as follows.

--Then, in the case in which a lapsed time from finish of the image formation of the last time is long and it is judged NO in step S20 for judging whether or not T is equal to or shorter than four hours, the processing proceeds to step S24 for judging whether or not M is equal to or smaller than 50%. If it is judged YES, the developing roller 5 is idled for seven seconds in step S25. If it is judged NO, the developing roller 5 is idled for ten seconds in step S26. [[S16.]]--

Please amend the paragraphs starting at page 52, line 27 and ending at page 53, line 14 to read, as follows.

--Note that the developing rollers 5 are separated from the photosensitive drum 1 by the contact/separation mechanisms 40 of the developing devices ~~means~~ 4a to 4d at this point.

Next, upon receiving a new image formation command from the host apparatus such as the personal computer in step S103, a lapsed time T from the finish time of previous image formation recorded in the storage means B via the read/write control portion C is calculated in step S104, and a time during which the developing rollers 5 should be idled before an image forming process is determined according to a value of T

and ambient environmental information obtained by using the charging roller 2 provided in the image forming apparatus A as described above.--

Please amend the paragraph starting at page 53, line 20 and ending at page 54, line 14 to read, as follows.

--A case in which T is five hours will be described as an example. In the case in which the environmental state is the high temperature and high humidity environment, that is, when the DC bias controlled to a constant current of –20 μA is applied to the charging roller 2 in step S106, an output voltage value |V| at that time is judged in step S107. ~~When it is judged that the output voltage value |V| is smaller than 1.3 kV, the processing proceeds to step S8 for judging whether or not T is equal to or shorter than two hours. Since it is judged NO in step S8 and it is judged NO in the next step S110 for judging whether or not T is equal to or shorter than four hours, the processing proceeds to step S112, where the developing apparatuses mounted with the respective developing devices rotate in a direction of an arrow.~~

In the case that an output voltage V satisfies $|V| < 1.3$ in step S107, and in the case that a lapsed time T from a finishing time of a preceding image forming step satisfies $T \leq 2$ hours in step S108, the developing roller is idled for five seconds in step 109.

In the case that an output voltage V satisfies $|V| < 1.3$ in the step S107, and in the case that a lapsed time T from a finishing time of a preceding image forming step does not satisfy $T \leq 2$ hours in step S108, and in the case that the lapsed time T satisfies $T \leq 4$ hours in step S110, the developing roller is idled for eight seconds in step S111.

In the case that an output voltage V satisfies $|V| < 1.3$ in the step S107, and in the case that a lapsed time T from a finishing time of a preceding image forming step does not satisfy $T \leq 2$ hours in step S108, and in the case that the lapsed time T does not satisfy $T \leq 4$ hours in step S110, the developing roller is idled for fifteen seconds in step S112.

In the case that an output voltage V satisfies $1.3 \leq |V| \leq 1.8$ in step S107, a determination of whether a lapsed time T from a finishing time of a preceding image forming step satisfies $T \leq 2$ hours is effected in step S113.

In the case that an output voltage V satisfies $1.3 \leq |V| \leq 1.8$ in step S107, and in the case that a lapsed time T from a finishing time of a preceding image forming step satisfies $T \leq 2$ hours in step S113, the developing roller is idled for three seconds in step S114.

In the case that an output voltage V satisfies $1.3 \leq 1.8$ in step S107, and in the case that a lapsed time T from a finishing time of a preceding image forming step does not satisfy $T \leq 2$ hours in step S113, a determination of whether the lapsed time T satisfies $T \leq 4$ is effected in step S115.

In the case that an output voltage V satisfies $1.3 \leq |V| \leq 1.8$ in step S107, and in the case that a lapsed time T from a finishing time of a preceding image forming step does not satisfy $T \leq 2$ hours in step S113, and in the case that the lapsed time T satisfies $T \leq 4$ hours in step S115, the developing roller is idled for five seconds in step S116.

In the case that an output voltage V satisfies $1.3 \leq |V| \leq 1.8$ in step S107, and in the case that a lapsed time T from a finishing time of a preceding image forming step does not satisfy $T \leq 2$ hours in step S113, and in the case that the lapsed time T does not satisfy $T \leq 4$ hours in step S115, the developing roller is idled for ten seconds in step S118.

In the case that an output voltage V satisfies $1.8 \leq |V|$ in step S107, a determination of whether a lapsed time T from a finishing time of a preceding image forming step satisfies $T \leq 2$ hours is effected in step S119.

In the case that an output voltage V satisfies $1.8 < |V|$ in step S107, and in the case that a lapsed time T from a finishing time of a preceding image forming step satisfies $T \leq 2$ hours in step S119, the developing roller is idled for two seconds in step S120.

In the case that an output voltage V satisfies $1.8 < |V|$ in step S107, and in the case that a lapsed time T from a finishing time of a preceding image forming step does not satisfy $T \leq 2$ hours in step S119, a determination of whether the lapsed time T satisfies $T \leq 4$ hours is effected in step S121.

In the case that an output voltage V satisfies $1.8 < |V|$ in step S107, in the case that a lapsed time T from a finishing time of a preceding image forming step does not satisfy $T \leq 2$ hours in step S119, and in the case that the lapsed time T does not satisfy $T \leq 4$ hours in step S121, the developing roller is idled for eight seconds in step S122.

In the case that an output voltage V satisfies $1.8 < |V|$ in step S107, in the case that a lapsed time T from a finishing time of a preceding image forming step does not satisfy $T \leq 2$ hours in step S119, and in the case that the lapsed time T satisfies $T \leq 4$ hours in step S121, the developing roller is idled for four seconds in step S123.

First, the first developing device 4a containing the yellow toner is moved to the development position opposed to the photosensitive drum 1, and the developing roller 5 is driven to idle for fifteen seconds by the motor (not shown) in a state in which the developing roller 5 is separated from the surface of the photosensitive drum 1.--

Please amend the paragraph starting at page 55, line 9 and ending at page 56, line 4 to read, as follows.

--Judging from the flowchart of Figs. 10A and 10B, in this embodiment, as described above, in the high temperature and high humidity environment, the idling time of the developing roller 5 is five seconds when T is equal to or shorter than two hours, eight seconds when T is longer than two hours and equal to or shorter than four hours, and fifteen seconds when T is longer than four hours. In addition, in the normal temperature and normal humidity environment in which the output voltage |V| is equal to or larger than 1.3 kV and equal to or smaller than 1.8 kV in step S107, the idling time of the developing roller 5 is three seconds when T is equal to or shorter than two hours, five seconds when T is longer than two hours and equal to or shorter than four hours, and ten seconds when T is longer than four hours. In the low temperature and low humidity environment in which the output voltage |V| is larger than 1.8 kV in step S107, the idling time of the developing roller 5 is two seconds when T is equal to or shorter than two hours, four seconds when T is longer than two hours and equal to or smaller than four hours, and eight seconds when T is longer than four hours.--

Please amend the paragraph starting at page 58, line 15 and ending at page 58, line 21 to read, as follows.

--Thus, in the present invention, as shown in Fig. 1, the developing devices ~~means~~ 4a to 4d are provided with the memory portion B serving as storage means such as a flash memory capable of recording and referring to an image formation history in addition to the

developing roller 5, the supply roller 6, the developing blade 7, the agitating member 8, and the like, respectively.--

Please amend the paragraph starting at page 60, line 1 and ending at page 60, line 9 to read, as follows.

--The image forming apparatus ~~main body~~ A includes a process control portion PD for controlling image formation, and the process control portion PD includes a read/write control portion C for accessing the storage portion F of the memory portion B to read out information or performing writing control. In this embodiment, history information obtained by forming an image in the image forming apparatus A is stored in a predetermined area of the storage portion F.--

Please amend the paragraph starting at page 60, line 17 and ending at page 60, line 22 to read, as follows.

--In addition, instead of the read/write control portion C, the process control portion PD (CPU) for controlling a process of the image forming apparatus A may perform read/write control, or a separate dedicated control portion may be provided to control reading and writing.--

Please amend the paragraph starting at page 61, line 26 and ending at page 62, line 7 to read, as follows.

--First, in step S201, the developing device 4' serving as a development cartridge E is mounted on the image forming apparatus A. ~~apparatus.~~ In a state in which a developing

device mounting cover D of the image forming apparatus A is closed, in step S202, information on image formation history recorded in the storage portions F of the memory portions B of the respective developing devices is sequentially read by the read/write control portion C of the image forming apparatus A. ~~apparatus.~~--

Please amend the paragraph starting at page 63, line 9 and ending at page 63, line 20 to read, as follows.

--That is, the control method for the image forming apparatus of the present invention includes a step of reading history information of storage means with a read/write control portion before image formation using developing means in a developing operation, a step of judging whether or not the developing means is in an unused state according to existence of the history information, and a step of, if it is judged ~~judge~~ in the judgment step that the developing means is in an unused state, separating a developing roller from a photosensitive drum to perform idling for a predetermined period of time.--

Please amend the paragraph starting at page 67, line 3 and ending at page 67, line 12 to read, as follows.

--First, in step S301, the developing device 4' is mounted on the image forming apparatus A and, in a state in which the developing device mounting cover D of the image forming apparatus A is closed, in step S302, the information on a contained developer color recorded in the storage portion F of the memory portion B of each developing device is read by the read/write control portion C of the image forming apparatus A. Then, in step

S303, the information on image formation history is read by the read/write control section C.--

Please amend the paragraph starting at page 69, line 14 and ending at page 69, line 22 to read, as follows.

--That is, the control method for the image forming apparatus according to this embodiment includes: a step of reading information on a contained developer color recorded in storage means with a read/write control portion if it is judged in a judgment step that a developing device ~~means~~ is unused; and a step of idling a developing roller for a predetermined period of time according to the information on a contained developer color.--

Please amend the paragraphs starting at page 74, line 13 and ending at page 74, line 25 to read, as follows.

--First, in step S401, the developing device 4' is mounted on the image forming apparatus A. ~~apparatus.~~ In a state in which the developing device mounting cover D of the image forming apparatus A is closed, in step S402, information on image formation history recorded in the storage portions F of the memory portions B of the respective developing devices is sequentially read by the read/write control portion C of the image forming apparatus A. ~~apparatus.~~

Note that the developing rollers 5 are separated from the photosensitive drum 1 by the contact/separation mechanisms 40 of the developing devices ~~means~~ 4a to 4d at this point.

If there is information on image information history, the developing roller 5 is caused to idle in step 404.--

Please amend the paragraph starting at page 75, line 8 and ending at page 75, line 19 to read, as follows.

--Then, for example, when an output voltage |V| at this point is judged smaller than 1.3 kV in step S407, that is, it is detected that the ambient environmental state is the high temperature and high humidity environment, the developing apparatus 4 mounted with the developing device 4' rotates in the direction of arrow, and the developing device 4' moves to the development position opposed to the photosensitive drum 1. In step S408, the [[The]] developing roller 5 is driven to idle for twenty seconds by the motor (not shown) in a state in which the developing roller 5 is separated from the surface of the photosensitive drum 1.--

Please amend the paragraph starting at page 78, line 18 and ending at page 78, line 21 to read, as follows.

--The developing devices ~~development cartridges~~ 4a to 4d contain a predetermined toner, respectively, and are provided with at least the developing roller 5 and the memory portion B.--